

**RECEIVED  
CENTRAL FAX CENTER****JUL 23 2007**AMENDMENTS TO THE CLAIMS:

1. (Cancelled):

2. (Withdrawn): An explicit routing method in a label switching system, comprising:

a step of flooding, as topology data, a set of an intra-system port and an IP address allocated to the port, or a set of a port group among a plurality of groups into which the ports are divided, and an IP address allocated to the port group; and

a step of managing the topology data flooded from other system and, when setting a label switched path on the basis of an explicit route specified, explicitly specifying a port or a port group of an egress node, and a port or a port group of a relay node on the basis of the received topology data.

3. (Withdrawn): An explicit routing method in a label switching system, comprising:

a step of flooding, as topology data, a set of an intra-system port and an IP address allocated to the port, or a set of a port group among a plurality of groups into which the ports are divided, and an IP address allocated to the port group.

4. (Withdrawn): An explicit routing method in a label switching system, comprising:

a step of flooding, as topology data, a set of an intra-system port and an IP address allocated to the port, or a set of a port group among a plurality of groups into which the ports are divided, and an IP address allocated to the port group by use of Opaque LSA of OSPF protocol.

5. (Cancelled)

6. **(Previously Presented):** An explicit routing method in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the explicit routing method comprising:

a step of specifying a port or a port group of the egress node by setting an IP address corresponding to the port or the port group of the egress node in a final ER-HOP-TLV field in ER-TLVs in Label Request Message of CR-LDP (Constraint-Based LSP setup using LDP (Label Distribution Protocol)); and

a step of specifying a port or a port group of the relay node by setting an IP address corresponding to the port or the port group of the relay node in an intermediate ER-HOP-TLV field in ER-TLVs in Label Request Message of the CR-LDP.

7. **(Previously Presented):** An explicit routing method in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the explicit routing method comprising:

a step of specifying the port or the port group of the egress node and the port or the port group of the relay node by adding an intra-system port number or an intra-system port group number in an ER-HOP-TLV field in ER-TLVs in Label Request Message of CR-LDP (Constraint-Based LSP setup using LDP (Label Distribution Protocol)).

8. **(Previously Presented):** An explicit routing method in a label switching system,

including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the explicit routing method comprising:

a step of explicating a port through which data should pass per system and specifying a port or a port group of the egress node by use of a resource class TLV field with ER-TLV in Label Request Message of CR-LDP (Constraint-Based LSP setup using LDP (Label Distribution Protocol)) being used as ER-HOP-TLV.

**9. (Previously Presented):** An explicit routing method in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the explicit routing method comprising:

a step of specifying a port or a port group of the egress node by setting an IP address corresponding to the port or the port group of the egress node in a final Subject-object field in Explicit Route Objects in a path message of RSVP protocol (Resource reSerVation Protocol) extended for setting a label switched path in MPLS protocol (Multi Protocol Label Switching); and

a step of specifying a port or port group of the relay node by setting an IP address corresponding to the port or the port group of the relay node in an intermediate Subject-object field in Explicit Route Objects in the path message of the RSVP protocol.

**10. (Previously Presented):** An explicit routing method in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an

explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the explicit routing method comprising:

a step of specifying a port or a port group of the egress node and a port or a port group of the relay node by adding an intra-system port number or an intra-system port group number in a Subject-object field in Explicit Route Objects in the path message of RSVP protocol (Resource reSerVation Protocol) extended for setting the label switched path in MPLS protocol (Multi Protocol Label Switching).

**11. (Previously Presented):** An explicit routing method in a label switching system, comprising:

a step of specifying an MPLS (Multi Protocol Label Switching) explicit route by adding, to an MPLS-to-IP forwarding function of a port group in one specified egress node, a communication function with an MPLS-to-IP forwarding function of a port group in an intra-system other egress node, and a forwarding function to the port group in the intra-system other egress node; and

wherein the one specified egress node and the intra-system other egress node are in a label switching router connected to an MPLS network and a non-MPLS network.

**12. (Cancelled):**

**13. (Withdrawn):** A packet router in a label switching system, comprising:

a module for flooding, as topology data, a set of an intra-system port and an IP address allocated to the port, or a set of a port group among a plurality of groups into which the

ports are divided, and an IP address allocated to the port group; and

a module for managing the topology data flooded from other system and, when setting a label switched path on the basis of an explicit route specified, explicitly specifying a port or a port group of an egress node, and a port or a port group of a relay node on the basis of the received topology data.

**14. (Withdrawn):** A packet router in a label switching system, comprising:

a module for flooding, as topology data, a set of an intra-system port and an IP address allocated to the port, or a set of a port group among a plurality of groups into which the ports are divided, and an IP address allocated to the port group.

**15. (Withdrawn):** A packet router in a label switching system, comprising:

a module for flooding, as topology data, a set of an intra-system port and an IP address allocated to the port, or a set of a port group among a plurality of groups into which the ports are divided, and an IP address allocated to the port group by use of Opaque LSA of OSPF protocol.

**16. (Cancelled)**

**17. (Previously Presented):** A packet router in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the packet router comprising:

a module for specifying a port or a port group of the egress node by setting an IP address corresponding to the port or the port group of the egress node in a final ER-HOP-TLV field in ER-TLVs in Label Request Message of CR-LDP (Constraint-Based LSP setup using LDP (Label Distribution Protocol)); and

a module for specifying a port or a port group of the relay node by setting an IP address corresponding to the port or the port group of the relay node in an intermediate ER-HOP-TLV field in ER-TLVs in Label Request Message of the CR-LDP.

**18. (Previously Presented):** A packet router in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the packet router comprising:

a module for specifying the port or the port group of the egress node and the port or the port group of the relay node by adding an intra-system port number or an intra-system port group number in a ER-HOP-TLV field in ER-TLVs in Label Request Message of CR-LDP (Constraint-Based LSP setup using LDP (Label Distribution Protocol)).

**19. (Previously Presented):** A packet router in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the packet router comprising:

a module for explicating a port through which data should pass per system and specifying a port or a port group of the egress node by use of a resource class TLV field with

ER-TLV in Label Request Message of CR-LDP (Constraint-Based LSP setup using LDP (Label Distribution Protocol)) being used as ER-HOP-TLV.

20. **(Previously Presented):** A packet router in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the packet router comprising:

a module for specifying a port or a port group of the egress node by setting an IP address corresponding to the port or the port group of the egress node in a final Subject-object field in Explicit Route Objects in a path message of RSVP protocol (Resource reSerVation Protocol) extended for setting a label switched path in MPLS protocol (Multi Protocol Label Switching); and

a module for specifying a port or port group of the relay node by setting an IP address corresponding to the port or the port group of the relay node in an intermediate Subject-object field in Explicit Route Objects in the path message of the RSVP protocol.

21. **(Previously Presented):** A packet router in a label switching system, including explicitly specifying, when setting a label switched path (LSP) on the basis of an explicit route specified, a port or a port group of an egress node, and a port or a port group of a relay node, the packet router comprising:

a module for specifying a port or a port group of the egress node and a port or a port group of the relay node by adding an intra-system port number or an intra-system port group number in an Subject-object field in Explicit Route Objects in the path message of RSVP

protocol (Resource reSerVation Protocol) extended for setting the label switched path in MPLS protocol.

22. (Previously Presented): A packet router in a label switching system, comprising:

a module for specifying an MPLS (Multi Protocol Label Switching) explicit route by adding, to an MPLS-to-IP forwarding function of a port group in one specified egress node, a communication function with an MPLS-to-IP forwarding function of a port group in an intra-system other egress node, and a forwarding function to the port group in the intra-system other egress node; and

wherein the one specified egress node and the intra-system other egress node are in a label switching router connected to an MPLS network and a non-MPLS network.